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ART UNIT	PAPER NUMBER
2162	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/682,098	BERNHART ET AL.	
	Examiner	Art Unit	
	Baoquoc N. To	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08/22/2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claim 1 is amended in the amendment filed on 08/22/2006. Claims 1-47 are pending in this application.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

MPEP 2106 IV. B.2. (b)

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts.

2. Claims 29-32 and 46-47 in view of the above cited MPEP section, are not statutory because claims they merely recite computing steps without producing any concrete and useful result and/or being limited to a practical application within the technological arts. The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable

medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994). Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.").

Response to Arguments

3. Applicant's arguments filed 08/22/2006 have been fully considered but are moot in view of the new ground(s) of rejection.

The applicant also failed to articulate a suggestion or motivation to combine the reference and thus failed to establish a prima facie case of obviousness as required by law and under MPEP Section 706.02(j)..."

The examiner respectfully disagrees with the above argument. Wingfield discloses the concept of creating the biological experimental template using existing template or creating one (fig. 1). Wingfield was not explicitly whether nor not this temple working with Microarray; on the other hand, Maslyn discloses conducing biological experiment with Microarray using created template with defining attributes and control attributes (col. 5, 6 and 7). Clearly, the motivation is to create a template which will be able to stored information which acquired from the experiment using microarray.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonathan Wingfield, (Essay Explorer and a "Typical" Experiment, Molecular Correction Winter 2000, pages 290-23) in view Maslyn et al. (US. Patent No. 6,408,308 B1) and further in view Gotschim et al. (US. Patent No. 6,261,229 B1).

Regarding on claim 1, Wingfield teaches a method for managing biological information related to a biological experiment comprising:

Acquiring one or more biological values of the biological information using a probe array to conduct the biological experiment (table 1, 2, and 3 shows biological values collected from the plates) (page 2);

Generating a data template including one or more identifiers related to the use of the probe array (fig. 1 shows a generating a template) (page 21);and

Receiving in the data template the one or more biological values for at least one or more identifiers in accordance with the one or more biological attributes (table 1, 2 and 3 show data collection the plates) (page 21).

Wingfield does not explicitly the acquired one or more biological value information using a probe array, specifying in the data template the one or more identifiers related to the use of the probe array and one or more control type attributes having one or more predefined attribute values and selecting a first identifier of the one

or more identifiers from a drop-down list containing the one or more predefined attribute values. However, Maslyn discloses "the expression database 32 has many tables 60 storing information including biological 86, samples 88, data source 90, microarray chip design 94 hybridization 96, donor 98 and the like" (col. 4, lines 36-39). In addition, Maslyn also discloses "in step 252, one of the client system receives the raw expression data 140 (FIG. 4B) from the microarray reader/analyzer in the form of a file. In step 254, the system executes the driver procedure 72 (FIG. 4B) to generate flat files, called Processed MicroArray Data (PMD) files, from the raw expression data...) (col. 5, lines 60 to col. 6, lines 32). Furthermore, Maslyn also "FIG. 7A through 7K depict a data model for a representation set of tables and fields of expression database 32 of the present invention. Each table is represented by a block with name of the table listed above the block such as "PMDData Source table." The tables store records. The table stores data for each record in the fields which are listed below each table name. The field name also describe the information stored in the field..."(col. 6, lines 61 to col. 8, lines 1-3). Maslyn discloses database tables for storing the acquired data from the microarray. Further, Maslyn also discloses "the data type is also shown. The data types are integer (int), character (char) followed by the number of characters in parentheses and floating point (float)..." (col. 7, lines 17-20) and other method summarizing by eliminating intensity values above and below predefined high and low values associated with specific gene or element on the microarray" (col. 6, lines 28-31). This suggests the defining of the attributes of the identifiers and control type of attributes Therefore, it would have been obvious to one ordinary skill in the art at the

time of the invention was made to modify Wingfield's system to include the data table for storing the acquired data from the microarray and defining the attributes of identifiers as taught Maslyn in order to provide a template to store experimental data. On the other hand, Gotschim teaches selecting a first identifier of the one or more identifiers from a drop-down list containing the one or more predefined attribute values (as corresponding to fig. 2-5B illustrate GUIs displayed on the display monitors 101A-104A, which guide the experimenter and the observers through these three programs. The Test Set-Up Program begins by displaying the GUI panels shown in FIG.2 in which an experimenter, i.e., the person designing the experiment, may enter the parameters of a new psychophysics experiment. GUI panel 200 includes the following objects: NAME text box 201, NUM SETS drop down box 202. METHOD selection box 203, OBJECTS selection box 204, SAMPLES selection box 205, CATEGERIES selection box 206, PICS button 207, and NEXT button 208. The experimenter enters: the name or title of a test in the NAME text box 201, e.g., "algotest;" the number of tests to be performed in the NUM SET box 202, such as 2 sets; the particular type of psychophysics tests are selected in the METHODS box 203, e.g., "Paired" and "Category," corresponding to the Paired Comparison and Categorical Scale testing methods previously described." (col. 5, lines 47-65). This suggests the recited limitation. Therefore, it would have been obvious to one ordinary skill in the art at the time of the of the invention was made to modify the of Wingfield and Maslyn system to include selecting of the experiment name as taught by Gotschim in order to create an experimental template to conduct experiment.

Regarding on claim 2, Wingfield teaches (e) storing the one or more biological values for the at least one or more identifiers in a data structure (table 2, page).

Regarding on claim 3, Wingfield teaches the data structure is included in a database (page 22, fig. 1).

Regarding on claims 4 and 30, Wingfield teaches the one or more identifiers comprise experiment identifiers and the data templates comprise an experiment data template (page 22, fig. 1).

Regarding on claim 5, Wingfield teaches the one or more identifiers comprise sample identifiers (page 21, fig. 1, plate id) and the data template comprises a sample data template (page 22, fig. 1, experimental layout).

Regarding on claim 6, Wingfield teaches the data structure comprises an experiment information file for storing the biological information related to the biological experiment (select the data file, page 22, fig. 1).

Regarding on claim 7, Wingfield teaches displaying, prior to receive the biological values for one or more identifier, the data template to a first user (after the selecting of the experimental layout, the template display to the first selector) (page 22, fig. 1).

Regarding on claim 8, Wingfield teaches the value is provided by the first user responsive to displaying the data template (assign the values to different well) (page 22, first column, lines 34-35).

Regarding on claim 9, Wingfield teaches the value is provided by the first user in accordance with a first type attribute (page 21, fig. 1, shows the first user define the attributes types).

Regarding on claim 10, Wingfield teaches the first type attribute is a data attribute, time attribute, integer attribute, floating point, data attribute, character string attribute, required attribute, or controlled attribute (page 21, fig. 1).

Regarding on claim 11, Wingfield teaches the value is provided by the first user in accordance with a required attribute (scientists to assign values to different wells) (col. 1, lines 34-35).

Regarding on claim 12, Wingfield teaches the required attribute specifies that the value is either required or not required to be received (page 21, fig. 1, values are required).

Regarding on claim 13, Wingfield teaches the value is provided by the user in accordance with a controlled attribute (20 is the control attribute) (page 21, fig. 1).

Regarding on claim 14, Wingfield teaches the controlled attribute specifies that the value is to be one or more of a plurality of user-specified values specified by a second user (one or more scientist can change or assign the value for the wells) (page 22, lines 1-35).

Regarding on claim15, Wingfield teaches the first and second users are different users (**one of more scientists** are two different person) (page 22, lines 6-9).

Regarding on claim 16, Wingfield do not explicitly teaches (f) storing instrument information for at least one instrument in the data structure, wherein the instrument is included in the biological experiment related to the probe array. However, Maslyn discloses database 32 has many tables 60 storing information including biological 63, sample 88, data source 90, transcript 92, microarray design 94 hybridization 96, and

donor 98 and the like" (col. 4, lines 36-39). This teaches claimed limitation. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Wingfield's system to include storing instrument information as taught by Maslyn in order to allow other user to known the results and the equipments which use to conduct the experiment.

Regarding on claim 17, Wingfield does not explicitly teach (f) storing image in the data structure, wherein the image data is based, at least in part, on scanning of the probe array (page 23, third column, lines 15-16). On the other hand, Maslyn discloses the data storage manager further stores image data is based, at least in part, on scanning of the one or more probe arrays (as corresponding to the raw expression data 140 that is output from each manufacture's reader/analyzer...the reader/analyzer also supplies user defined data 142 in either separate file or alternatively in the same file ..." (col. 5, lines 35-44). This suggests the data is stored from the scanning of the microarray. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Wingfield's system to include storing the data read from the microarray in order to allow the data stored for the further analyzing.

Regarding on claim 18, Wingfield teaches (g) analyzing the image data to generate results data (page 23, third column, lines 15-16); and

(h) storing the results data in the data structure (page 23, third column, lines 15-16).

Regarding on claim 19, Wingfield teaches (i) tracking the value, the image data, and the result data (page 23, third column, lines 17-25).

5. Claims 20-38 and 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonathan Wingfield, (Essay Explorer and a "Typical" Experiment, Molecular Correction Winter 2000, pages 290-23) in view Maslyn et al. (US. Patent No. 6,408,308 B1)

Regarding on claim 20, Wingfield teach a method for managing biological experiment information generated through the performance of a biological experiment with probe arrays, the method comprising the steps of:

Receiving from a first user a selection of a first data template having a plurality of selected identifiers each identifying an attribute of the biological experiment (a user choose an experimental layout) (page 22, fig. 1);

Displaying the first data template to the first user in response to the selection (an experimental template is disclosed) (page 21, fig. 1);

Receiving from the first user the biological values for one or more of the identifiers of the first data template in accordance with the attributes identified by the one or more identifiers (table 1, 2 and 3 show data collection the plates) (page 21); and

saving the biological values in the data structure (page 23, third column, lines 15-16).

Receiving in the data template the one or more biological values for at least one or more identifiers in accordance with the one or more biological attributes (table 1, 2 and 3 show data collection the plates) (page 21).

Wingfield discloses generating template to store biological experiment. Wingfield does not explicitly acquiring one or more biological values of the biological information using the probe array; however, Maslyn discloses "the expression database 32 has many tables 60 storing information including biologicals 86, samples 88, data source 90, microarray chip design 94 hybridization 96, donor 98 and the like" (col. 4, lines 36-39). In addition, Maslyn also discloses "in step 252, one of the client system receives the raw expression data 140 (FIG. 4B) from the microarray reader/analyzer in the form of a file. In step 254, the system executes the driver procedure 72 (FIG. 4B) to generate flat files, called Processed MicroArray Data (PMD) files, from the raw expression data...) (col. 5, lines 60 to col. 6, lines 32). Furthermore, Maslyn also "FIG. 7A through 7K depict a data model for a representation set of tables and fields of expression database 32 of the present invention. Each table is represented by a block with name of the table listed above the block such as "PMDData Source table." The tables store records. The table stores data for each record in the fields which are listed below each table name. The field name also describe the information stored in the field..."(col. 6, lines 61 to col. 8, lines 1-3). Maslyn discloses database tables for storing the acquired data from the microarray. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Wingfield's system to include the data table for storing the acquired data from the microarray as taught Maslyn in order to provide storage for storing experimental data.

Regarding on claim 21, Wingfield teaches the receiving step comprise the steps of: (1) displaying a list of names of plurality of data templates (page 22, fig. 1); and

(2) receiving from the first user, a selection of one of the displayed list of name a name of the first data template (choose the experimental layout) (page 22, fig. 1).

Regarding on claim 22, Wingfield teaches the plurality of data templates include one or more default data templates (choose the experimental layout) (page 22, fig. 1).

Regarding on claim 23, Wingfield teaches the list of names is displayed to the first user in a tree structure of a graphical user interface (page 22, fig. 1).

Regarding on claim 24, Wingfield teaches the data structure includes an experiment information file (page 22, fig. 1).

Regarding on claim 25, Wingfield teaches the experiment information file is included in a database (page 22, col. 1, lines 25-28).

Regarding on claim 26, Wingfield teaches (e) generating the first data template based, at least in part, on a second user specifying the plurality of identifiers (the data template is generated based on one more user) (page 22, fig. 1).

Regarding on claim 27, Wingfield teaches generating the first template based, at least in part, on a second user specifying the attributes of the plurality of identifiers (one or more scientist in the group can load and the previously experiment and change the or assign the value for the wells (page 22, lines 1-35).

Regarding on claim 28, Wingfield teaches the first and second users are different users (one or more scientists are two different person) (page 22, lines 6-9).

Regarding claim 29, Wingfield teaches a computer program product, comprising:

A value receiver that receives values for the identifiers in accordance with their attributes (a layout can compare retrieve different run wherein each run obtains the data from the wells plates) (page 23, first column, lines 27-29); and

Data storage manager that stores the values in a data structure (table 1, 2 and 3 show data collection the plates) (page 21); wherein the values are based on the one or more biological experiments (a layout can compare retrieve different run wherein each run obtains the data from the wells plates) (page 23, first column, lines 27-29).

Wingfield teaches template generator that generates a data template including one or more identifiers of one or more biological experiments using a probe array, each identifying an attribute of the experiment (table 1, 2, and 3 shows biological values collected from the plates) (page 2). Wingfield does not explicitly teach the experiment template using probe array. However, Maslyn discloses "the expression database 32 has many tables 60 storing information including biologicals 86, samples 88, data source 90, microarray chip design 94 hybridization 96, donor 98 and the like" (col. 4, lines 36-39). In addition, Maslyn also discloses "in step 252, one of the client system receives the raw expression data 140 (FIG. 4B) from the microarray reader/analyzer in the form of a file. In step 254, the system executes the driver procedure 72 (FIG. 4B) to generate flat files, called Processed MicroArray Data (PMD) files, from the raw expression data...) (col. 5, lines 60 to col. 6, lines 32). Furthermore, Maslyn also "FIG. 7A through 7K depict a data model for a representation set of tables and fields of expression database 32 of the present invention. Each table is represented by a block with name of the table listed above the block such as "PMDData Source table." The

tables store records. The table stores data for each record in the fields which are listed below each table name. The field name also describe the information stored in the field..."(col. 6, lines 61 to col. 8, lines 1-3). Maslyn discloses the experiment using microarray. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Wingfield's system to include conducting experiment using microarray as taught Maslyn in order to conduce biological experiment.

Regarding on claim 30, Wingfield teaches the computer program product of claim 29, wherein: the identifiers include experiment identifier and the data template includes an experiment data template (page 22, fig. 1).

Regarding on claim 31, Wingfield teaches the computer program product of claim 29, wherein: the identifier include sample identifiers and the data template includes a sample data template (page 22, fig. 1, experimental layout).

Regarding on claim 32, Wingfield teaches the computer program product of claim 29, wherein: the data structure includes an experiment information file (select the data file, page 22, fig. 1).

Regarding on claim 33, Wingfield discloses the computer program product of claim 29, wherein specifying at least one of the one or more identifiers (page 21, fig. 1)

Regarding on claim 34, Wingfield teaches a template generator generates the data template in response to a first user specifying at least one attribute of the one or more identifiers (page 21, fig. 1).

Regarding on claim 35, Wingfield teaches the data template is selected by a second user (page 23, first column, lines 1-7).

Regarding on claim 36, Wingfield do not explicitly teaches (f) storing instrument information for at least one instrument in the data structure, wherein the instrument is included in the biological experiment related to the probe array. However, Maslyn discloses database 32 has many tables 60 storing information including biological 63, sample 88, data source 90, transcript 92, microarray design 94 hybridization 96, and donor 98 and the like" (col. 4, lines 36-39). This teaches claimed limitation. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Wingfield's system to include storing instrument information as taught by Maslyn in order to allow other user to known the results and the equipments which use to conduct the experiment.

Regarding on claim 37, Wingfield does not explicitly teach the computer program product of claim 29, wherein the data storage manager further stores image data is based, at least in part, on scanning of the one or more probe arrays. On the other hand, Maslyn discloses the data storage manager further stores image data is based, at least in part, on scanning of the one or more probe arrays (as corresponding to the raw expression data 140 that is output from each manufacture's reader/analyzer...the reader/analyzer also supplies user defined data 142 in either separate file or alternatively in the same file ..." (col. 5, lines 35-44). This suggests the data is stored from the scanning of the microarray. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Wingfield's

system to include storing the data read from the microarray in order to allow the data stored for the further analyzing.

Regarding on claim 38, Wingfield teaches the computer program product of claim 29, further comprising: an analysis application that analyzes the image data to generate result data (page 23, third column, lines 15-16); and wherein the data storage manager further stores the result in the data structure (page 23, third column, lines 15-16).

Regarding on claim 45, Wingfield discloses a method information when performing a biological experiment on a biological sample comprising:

Generating an experimental data template including one or more experimental identifiers that are specified as having one or more experimental attribute (page 21, fig. 1);

Generating a sample data template including one or more sample identifiers related to the biological sample, wherein the one or more sample identifier are specified as having one or more sample attributes (generating 10-15 different plate layouts in the course of testing an experiment) (page 23, first column, lines 21-23);

Storing the experimental data template and sample data template on a storage medium (data retrieved different run, one run one of the experiment data temple and other run can be sample data template) (page 23, first column, lines 27-29);

Inputting into an experimental manager at least one experimental value and at least one sample value (scientists can quickly tweak a layout (experimental manager) and can readily compare the data retrieval from different run) (page 23, first column, lines 27-29), wherein the at least one experimental value is inputted by retrieving the

experimental data template and receiving in the experimental data template the one or more experimental for at least of one or more experimental identifier in accordance with the one or more experimental attributes (page 21, fig. 1), and wherein the at least one sample value is inputted by retrieving the sample data template and retrieving in the sample data template the one or more sample values for at least one of the one or more sample identifiers in accordance with the one or more sample attributes (page 21, fig. 1); and

Wingfield do not explicitly teach capturing instrument operational values directly from at least one instrument used to conduct the biological experiment by the experiment manager (a layout can compare retrieve different run wherein each run obtains the data from the wells plates) (page 23, first column, lines 27-29). This suggests the data obtain the instrumental device. Furthermore, Maslyn teaches capturing instrument operational values directly from at least one instrument used to conduct the biological experiment by the experiment manager (as to corresponding the level of any expression can alternative different sites having different probes associated with different gene" (col. 5, lines 35-38). This suggests the concept capturing the operation value from the instrument. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Wingfield's system to include the capturing data from different sites as taught by Maslyn in order to create a dynamic experiment system which also allow other distribute user to participate.

Regarding on claim 46, Wingfield teaches a method for managing biological information related to a biological experiment comprising:

Acquiring one or more biological values of the biological information using a probe array to conduct the biological experiment (table 1, 2, and 3 shows biological values collected from the plates) (page 2);

Generating a data template including one or more identifiers related to the use of the probe array (fig. 1 shows a generating a template) (page 21);and

Receiving in the data template the one or more biological values for at least one or more identifiers in accordance with the one or more biological attributes (table 1, 2 and 3 show data collection the plates) (page 21).

Wingfield does not explicitly the acquired one or more biological value information using a probe array and specifying in the data template the one or more identifiers, wherein at least one of the one or more attributes is a biological attribute. However, Maslyn discloses "the expression database 32 has many tables 60 storing information including biological 86, samples 88, data source 90, microarray chip design 94 hybridization 96, donor 98 and the like" (col. 4, lines 36-39). In addition, Maslyn also discloses "in step 252, one of the client system receives the raw expression data 140 (FIG. 4B) from the microarray reader/analyzer in the form of a file. In step 254, the system executes the driver procedure 72 (FIG. 4B) to generate flat files, called Processed MicroArray Data (PMD) files, from the raw expression data...) (col. 5, lines 60 to col. 6, lines 32). Furthermore, Maslyn also "FIG. 7A through 7K depict a data model for a representation set of tables and fields of expression database 32 of the

present invention. Each table is represented by a block with name of the table listed above the block such as "PMDData Source table." The tables store records. The table stores data for each record in the fields which are listed below each table name. The field name also describe the information stored in the field..."(col. 6, lines 61 to col. 8, lines 1-3). Maslyn discloses database tables for storing the acquired data from the microarray. Further, Maslyn also discloses "the data type is also shown. The data types are integer (int), character (char) followed by the number of characters in parentheses and floating point (float)..." (col. 7, lines 17-20). This suggests the defining of the attributes of the identifiers. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Wingfield's system to include the data table for storing the acquired data from the microarray and defining the attributes of identifiers as taught Maslyn in order to provide a template to store experimental data.

Regarding on claim 47, Whingfiled teaches the methods of claim 46, wherein the biological attribute is the concentration of the probe and target, time, temperature, cation concentration, valency and character, pH, dielectric and chaotropic media, or density spacing of the probe molecules synthesized on the surface (fig. 1).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 39-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Blevind (US. Patent No. 5,594,858).

Regarding on claim 39, Blevins teaches a computer implemented system for managing information of probe array experiments, comprising:

A computer-readable storage medium (memory) (col. 5,lines 60-67);

A database (library 11) (col. 6, line1);

A data template generator (template generator 124) coupled to the computer-readable storage medium (col. 7, lines 18-20); and

An experiment manager (control template system) coupled to the computer readable storage medium and the database (col. 7, lines 18-20),

Wherein the data template generator generates at least one user-defined data template (selects the type of control template to be created) and stores (save) the user-defined data template on the computer-readable medium (col. 12, lines 1-5), each user-defined data template defining attributes of a set of user-selected experiment identifiers (col. 11, lines 10-15), a data template being selected from the at least one user-defined data template (a list of predefined or existing templates) (col. 12, lines 1-5) by a user using the experiment manager, experiment identifiers being input (list of data prompts)

(col. 10, lines 1-4) using the experiment manager according to the selected data template, the inputted experiment identifiers being stored in the database as an experiment information file (save) (col. 17, lines 34-36).

Regarding on claim 40, Blevins teaches instrument information is included in the experiment information file (col. 17, lines 25-35).

Regarding on claim 41, Blevins teaches a data processor couple to the database, for acquiring experiment data and storing the experiment data as an experiment data file in the database, a data analyzer, connected to the database, for analyzing result files in the database; and

A file manager (the control template library) for tracking the experiment file, the experiment data file, and analyzing results files (col. 7, lines 18-19).

Regarding on claim 42, Blevins teaches the experiment data file is an image file (col. 17, lines 25-35).

Regarding on claim 43, Blevins teach the file manager tracks the experiment information file, the experiment data file, and the analyzed results files according to the files names (col. 12, lines 18-37).

Regarding on claim 44 is rejected same as claim 39, in addition Blevins also teaches a computer-readable storage medium having at least one default data table stored thereon (predefined or existing templates) (col. 12, lines 1-5).

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is at 571-272-

4041 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at 571-272-4107.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

(571) –273-8300 [Official Communication]

BQ To

November 11th, 2006

JOHN BREENE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100